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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Thomas Teuschler et al.

Group Art Unit: 2813

Examiner: Tuan H. Nguyen

Serial No.: 10/762,111

Filed: January 21, 2004

For: POLISHED SEMICONDUCTOR WAFER AND PROCESS
FOR PRODUCING IT

Attorney Docket No.: WSAG 0144 PUS

RESPONSE TO RESTRICTION REQUIREMENT

Mail Stop Amendment
Commissioner for Patents
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is a response to the Restriction Requirement of September 29, 2005.
Applicants elect the Group I claims, claims 1 - 3 and 5 - 9, with traverse.

Applicants submit that the basis for restriction is flawed, since the surface flatness near the edge of the wafer cannot be accomplished by a materially different process such as lapping or grinding. The flatness requirements of semiconductor wafers is extreme, and in the past, edge regions and other regions have not been useable because their topology differs significantly from the rest of the wafer. Although silicon is viewed as a relatively hard, unyielding crystalline substance, even very minor distortion and/or surface irregularities may prevent a high degree of planarity being achieved. For example, when a vacuum chuck, which is very common, is used, holes in the surface of the chuck will cause minor depressions in the wafer opposite surface during polishing. When vacuum is removed, these regions spring back,

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October 13, 2005
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creating raised bumps on the surface. The edge regions of wafers are not uniform up to the edge of the wafer, and when lapped or ground, these non-uniform areas persist. The subject invention causes these areas to be uniform, and thus polishing can proceed without a non-uniform area being present.

Applicants are unaware of any method of grinding or lapping in the prior art which is capable of addressing departures from planarity in the edge region. If the Office is aware of a reference which discloses such a method at this edge region, the reference should be cited. Otherwise, the restriction should be withdrawn.

Prompt and favorable consideration of this application is requested. If the Examiner notes any minor errors, he is invited to telephone the undersigned so that the matter can be promptly handled by Examiner's amendment.

Respectfully submitted,

Thomas Teuschler et al.

By: 

William G. Conger

Reg. No. 31,209

Attorney/Agent for Applicant

Date: October 13, 2005

BROOKS KUSHMAN P.C.
1000 Town Center, 22nd Floor
Southfield, MI 48075-1238
Phone: (248) 358-4400
Fax: (248) 358-3351